Special Issue

Dispersion and Mitigation of Atmospheric Pollutants

Message from the Guest Editors

The dispersion and mitigation of atmospheric pollutants in urban environments is a pressing challenge as cities grow and air quality continues to deteriorate. Urban structures such as dense building layouts and limited ventilation, combined with localized thermal effects, contribute to the accumulation of harmful pollutants. This Special Issue seeks to gather innovative research focused on the dispersion mechanisms of atmospheric pollutants and explore advanced mitigation strategies to improve urban air quality. We welcome interdisciplinary contributions from fields such as environmental science, engineering, urban planning, public health, and more, addressing the complex interactions between urban design, meteorological factors, and pollutant dispersion. Key areas of interest include the following:

- Pollutant dispersion mechanisms in urban street canyons;
- Wind–heat–pollution coupling and its effects on pollutant dispersion;
- Urban design innovations for improving ventilation, mitigating urban heat islands, and removing pollution;
- Impact of urban blue–green spaces (water bodies and greenery) on pollution dispersion.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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